

***The Environmental Case for CHP:  
Part of the Solution to Global  
Warming Pollution***

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## *The Environmental Case for CHP*

- Overview of WWF and its role in the Climate Issue
- Kyoto Protocol
- America's Global Warming Solutions Report
- Benefits of CHP
- Climate Savers Program



# World Wildlife Fund

- Scope
  - Largest independent member-based conservation organization in the world, 4.7 million supporters
  - Conservation of biological diversity worldwide
  - Over 35 years old with 10 years of climate and energy experience
- Reach
  - Presence in 100 countries
  - Web site reaches 3 million people per month
  - World's most recognized conservation logo - the panda!



## *WWF, Climate, and Energy Use*

- WWF focuses on grassroots conservation work to protect key species and spaces and **Four Global Threats** that it actively addresses to make its conservation efforts more effective:
  - climate change
  - unsustainable timber trade
  - overfishing
  - toxic pollution
- International Climate Campaign - Twenty staff in 13 countries working on impacts, policy, and solutions (including private sector initiatives).



## *Kyoto Protocol*

- Industrialized countries 5.2% below 1990 levels of all six greenhouse gases (GWPs)
  - U.S.A. -7%
  - European Union -8%

Germany	-21%	UK	-12.5%
Italy	-6.5%	Spain	+15%
Netherlands	-6%	France	0%
  - Others
    - Japan -6%; Russian Federation 0%; Australia +8%



## *Kyoto Protocol*

- Commitment period of 2008-2012
- Baseline years
  - 1990
    - Carbon Dioxide (CO<sub>2</sub>)
    - Methane (CH<sub>4</sub>)
    - Nitrous Oxide (N<sub>2</sub>O)
  - 1990 or 1995
    - Hydrofluorocarbons (HFCs)
    - Perfluorocarbons (PFCs)
    - Sulfur hexafluoride (SF<sub>6</sub>)



## *Kyoto Protocol*

- Sectors / Source Categories
- Land-Use Change and Forestry in Industrialized Countries - rules by Fall of 2000
- Flexible Mechanisms - rules by Fall of 2000
  - Emissions Trading
  - Joint Implementation
  - Clean Development Mechanism
- Compliance - rules by Fall of 2000

## *America's Global Warming Solutions*

- The U.S. can cost-effectively reduce its emissions to 7% below 1990 or 14% below 1990 by 2010 at a net increase in jobs
- CHP is included in a portfolio of policies and measures to accomplish these reductions



## *America's Global Warming Solutions*

- WWF advocates domestic emissions reductions
- Limited use of flexibility mechanisms
- Targeted improvements in transportation, industry, electricity generation, and commercial and residential buildings



## CHP

- Business and environmental benefits: energy costs, GHG emissions and regional pollutants are significantly reduced
- Average fossil-fuel electric power plant - 1/3 efficient
- Waste heat typically thrown away
- Off-the-shelf natural gas CHP technologies can simultaneously generate electricity and steam at 80-90% efficiency right at the factory or building



## *Developing a business vision for climate management*

- A few leadership companies have committed to reduce greenhouse gases
- More companies need to take action
- WWF in partnership with Center for Energy and Climate Solutions = Climate Savers
- Climate Savers will help companies develop and implement cost-effective climate mitigation strategies



# Climate Savers

## *Benefits*

- Knowledge-base
  - Strategic planning - profitable energy and climate management
  - Technical assistance
  - Benchmarking
  - CO<sub>2</sub> reductions verified
  - Environmental trends into company goals
- Recognition and communication
  - Customized outreach
  - WWF's international network
  - Earth Day 2000
  - Best practices exchange



# Climate Savers

## Goals

- Develop replicable business models that reduce greenhouse gas emissions
- Produce verifiable results
- Provide independent verification
- Get the word out: Reducing GHG is good for business and good for the environment